

**REMARKS**

By the above actions, claims 1 and 15 have been amended, and 24 and 26 have been cancelled. In view of these actions and the following remarks, further consideration of this application is requested.

Claims 1 and 25-26 have now been rejected based upon the combination of the Rock and Cisar et al. references when viewed in further combination with the Bailey et al. reference. This rejection is inappropriate as it relates to the claims as now presented for the following reasons.

The differences between the present invention and the Rock and Cisar et al. references have been fully commented upon in applicant's response of August 2008, and for the sake of brevity, the Examiner's attention is directed back to those comments which are hereby incorporated by reference.

While the Examiner is correct in his basic assessment that Bailey et al. teaches measuring a force exerted on a stack with a load monitoring device (force sensor), measuring (with a displacement measuring device) a displacement of the stack in response to the applied force, monitoring signals from monitoring devices with a controller; and generating output signals representative of the displacement of the stack as a function of the force exerted thereto, the Examiner has failed to appreciate that output signals are used, as claimed, so that the "application of the ... force component (F) is performed based upon a change of the dimensions ... detected with ..." This feature of the present invention has the benefit that the force curve over time in dependence on the measured displacement can be manipulated purposefully, by employing the output signals during the compressing. By adjusting the force curve over time in dependence on a work-piece-specific curve of displacement, the result of the process of compressing can be improved and a scrap rate can be reduced (see, the last paragraph on page 1 and the first paragraph on page 2 of the substitute specification).

In contrast to this, the prior art, in particular Bailey et al., only teach detecting and displaying of the measured displacement as a function of the measured force. However, the detecting and displaying mentioned does not comprise the feature of the present invention of using the measurement results (which result from the exertion of the force) for manipulating

the time-dependent force curve in real time (i.e., during the process of compressing the stack).

To further clarify the difference between the control of present invention and that of the prior art, independent claims 1 and 15 have been amended based upon the description found in the substitute specification from page 9, seventh from last line to page 10, line 1, where it is stated that:

a detected force-path curve of a bracing of the fuel cell stack (1) is compared to one or more predefined theoretical curves, wherein in case of deviations the force component (F) is increased or decreased as a countermeasure for the deviation.

In contrast to this, Bailey et al. teach, as a countermeasure, interrupting the application of force in response to an output signal of the controller. Thereby, the force component is reduced to zero, instead of increasing or reducing the force component dependent on the nature of the deviation (as taught by the present invention).


In addition, it is noted that, Bailey et al. only is directed to a method for fitting and testing PEM (proton exchange membrane) stacks, this reference provides no motivation to provide the above noted feature of the present invention. This is because a change of dimensions of a PEM stack is predominantly resilient. However, when compressing other types of fuel stacks like (solid oxide) SO stacks, the change of dimensions may be predominantly plastic, at a corresponding temperature. The present invention facilitates applying the controlled force component (as a function of the compression path) at a distinct instant, i.e., when the glass solder has assumed a plastic state of low resilience at the corresponding temperature. The feedback-controlled force is necessary for creating a controlled plastic flowing of the glass solder. Generally, not only tightness is desired, but also a correct contact is desired for the entire contact surface.

Thus, even if the control of the Bailey et al. reference were to be applied to the Rock method as modified on the basis of the Cisar et al. reference, the present invention would not result and the benefits thereof would not be obtained, nor would the invention and its benefits become obvious, and the same is true even if tensioning technique of Barton (applied in the rejection of claims 4, 5 & 13) and/or the leak testing of Hermann (applied in the rejection of

claims 6-10 & 14) are also incorporated. Accordingly, reconsideration and withdrawal of all of the outstanding rejections are in order and are now requested.

Therefore, in the absence of new and more relevant prior art being discovered, this application should now be in condition for allowance and action to that effect is requested. However, while it is believed that this application should now be in condition for allowance, in the event that any issues should remain, or any new issues arise, after consideration of this response which could be addressed through discussions with the undersigned, then the Examiner is requested to contact the undersigned by telephone for the purpose of resolving any such issue and thereby facilitating prompt approval of this application.

Respectfully submitted,

By:   
David S. Safran  
Registration No. 27,997

Customer No. 25570

Roberts Mlotkowski Safran & Cole, P.C.  
P.O. Box 10064  
McLean, VA 22102

Direct Telephone: (703) 584-3273